

CLAIMS

- 1 1. A megasonic cleaning vessel for cleaning a semiconductor wafer,  
2 comprising:  
3 a top chamber wall;  
4 a bottom chamber wall;  
5 side walls extending between said top chamber wall and said  
6 bottom chamber wall to provide a cleaning chamber;  
7 a megasonic transducer provided in said cleaning chamber;  
8 a pedestal extending upwardly from said bottom chamber wall for  
9 supporting the semiconductor wafer; and  
10 an electrical conduit provided through the cleaning vessel for  
11 connecting an electrical cable to said megasonic transducer at  
12 atmospheric pressure.
- 1 2. The megasonic cleaning vessel according to claim 1, further comprising a  
2 transducer housing provided in said cleaning chamber, and adapted to  
3 hold said megasonic transducer.
- 1 3. The megasonic cleaning vessel according to claim 2, wherein the electrical  
2 conduit comprises a first electrical cable port provided through said top  
3 chamber wall, and a second electrical cable port provided through said  
4 transducer housing.
- 1 4. The megasonic cleaning vessel according to claim 3, wherein said  
2 transducer housing is formed from a top housing wall, a bottom housing  
3 wall, and an interior wall and exterior wall extending therebetween, said  
4 second electrical cable port provided through said top housing wall.
- 1 5. The megasonic cleaning vessel according to claim 4, wherein the interior  
2 wall is cylindrical and the exterior wall is cylindrical.

- 1    6.    The megasonic cleaning vessel according to claim 4, wherein said first  
2        electrical cable port and said second electrical cable port are joined to  
3        form said electrical conduit using a sealing sleeve.
  
- 1    7.    The megasonic cleaning vessel according to claim 6, wherein the sealing  
2        sleeve is cylindrical.
  
- 1    8.    The megasonic cleaning vessel according to claim 1 wherein the cleaning  
2        chamber is adapted to receive carbon dioxide .
  
- 1    9.    The megasonic cleaning vessel according to claim 8 wherein the  
2        megasonic transducer is adapted to conduct megasonic energy to the  
3        carbon dioxide in the supercritical state.
  
- 1    10.   The megasonic cleaning vessel according to claim 9 wherein the electrical  
2        conduit is isolated from the supercritical carbon dioxide .